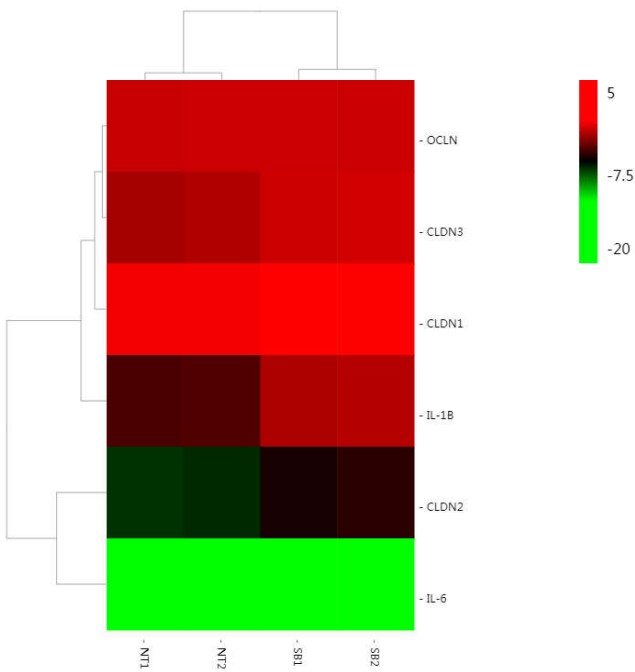
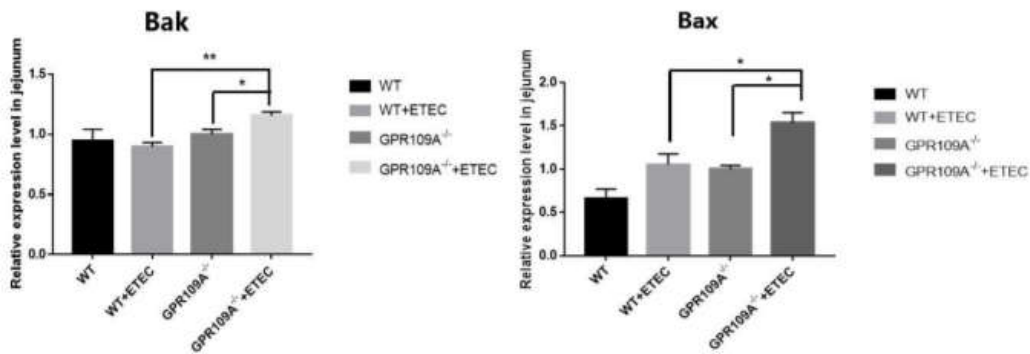


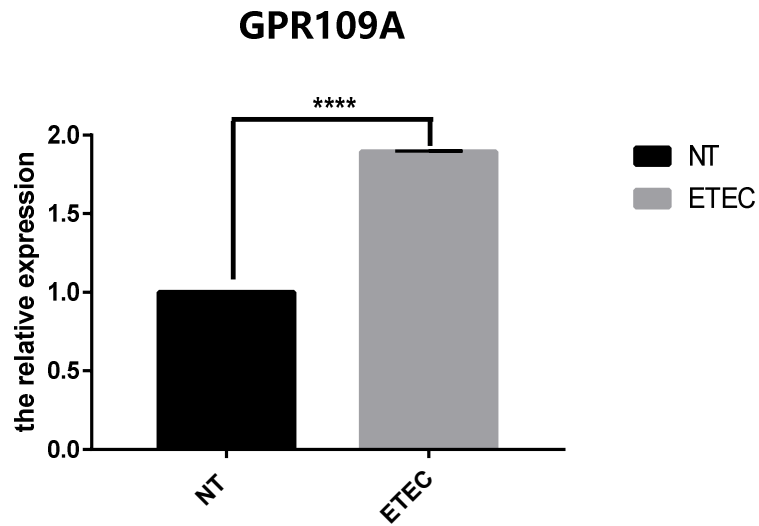
Supplementary materials



Supplementary fig-1 heat map for tight junction protein expression (FPKM) from Caco-2 treated with sodium butyrate.



Supplementary fig-2 expression level of apoptosis related genes Bak and Bax by qPCR in scraped intestinal mucosa cells with the existence or absence of GPR109A under ETEC challenge.



Supplementary fig-3. The expression of GPR109A in Caco-2 cells. Cells were inoculated with ETEC (5×10^7 CFU/well, MoI=100) in antibiotic-free medium and incubated for 1 h.